

PATENT  
Reply under 37 CFR 1.116  
EXPEDITED PROCEDURE  
Group 1731

AMENDMENT(S) TO THE CLAIMS

1. (currently amended) A paper machine, comprising:  
a press roll; and  
a suction roll assembly positioned in opposition to and defining a nip with said press roll,  
said suction roll assembly including:

5 a suction roll having a perforated shell; and  
a suction box positioned within said suction roll, said suction box including a  
holder, a seal strip adjacent said shell and carried by said holder, at least one target carried  
by said seal strip, and at least one sensor not connected to said sealed strip and being  
positioned in association with at least one corresponding said target, each said sensor  
10 providing an output signal indicative of a position of said at least one corresponding target  
relative to said holder.

2. (original) The paper machine of claim 1, wherein each said target is one of a metallic  
target, an optical target, and a mechanical target.

3. (original) The paper machine of claim 2, wherein each said target is a metal target, and  
each said sensor is a proximity sensor.

4. (original) The paper machine of claim 3, wherein each said metal target is a magnetic  
metal target.

5. (original) The paper machine of claim 1, wherein each said target is one of a strip, disc  
and rod shaped target.

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6. (original) The paper machine of claim 1, wherein at least one said sensor is carried by said holder.

7. (original) The paper machine of claim 6, wherein said monitoring circuit is portable.

8. (original) The paper machine of claim 1, further including a loading tube carried by said holder and biasing said seal strip against said suction roll shell.

9. (currently amended) A suction roll assembly, comprising:

a suction roll having a perforated shell; and

a suction box positioned within said suction roll, said suction box including a holder, a seal strip adjacent said shell and carried by said holder, at least one target carried by said seal strip, and at least one sensor positioned apart from said seal strip and being in association with at least one corresponding said target, each said sensor providing an output signal indicative of a position of said at least one corresponding target relative to said holder.

10. (original) The suction roll assembly of claim 9, wherein each said target is one of a metallic target, an optical target, and a mechanical target.

11. (original) The suction roll assembly of claim 10, wherein each said target is a metal target, and each said sensor is a proximity sensor.

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12. (original) The suction roll assembly of claim 11, wherein each said metal target is a magnetic metal target.
13. (original) The suction roll assembly of claim 9, wherein each said target is one of a strip, disc and rod shaped target.
14. (original) The suction roll assembly of claim 9, wherein at least one said sensor is carried by said holder.
15. (original) The suction roll assembly of claim 9, including at least one electrical plug-in connector positioned outside said suction roll, each said electrical plug-in connector coupled with a corresponding said sensor.
16. (original) The suction roll assembly of claim 15, a monitoring circuit connectable with said electrical plug-in connector.
17. (original) The suction roll assembly of claim 16, wherein said monitoring circuit is portable.
18. (currently amended) A suction box for use with a suction roll in a paper machine, said suction box comprising:
- a holder;
  - a seal strip carried by said holder;
  - at least one target carried by said seal strip; and

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at least one sensor positioned apart from said seal strip and being in association with at least one corresponding said target, each said sensor providing an output signal indicative of a position of said at least one corresponding target relative to said holder.

19. (original) The suction box of claim 18, wherein each said target is one of a metallic target, an optical target, and a mechanical target.

20. (original) The suction box of claim 19, wherein each said target is a metal target, and each said sensor is a proximity sensor.

21. (original) The suction box of claim 20, wherein each said metal target is a magnetic metal target.

22. (original) The suction box of claim 18, wherein each said target is one of a strip, disc and rod shaped target.

23. (original) The suction box of claim 18, wherein at least one said sensor is carried by said holder.

24. (original) The suction box of claim 18, including at least one electrical plug-in connector positioned outside said suction roll, each said electrical plug-in connector coupled with a corresponding said sensor.

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25. (original) The suction box of claim 24, a monitoring circuit connectable with said electrical plug-in connector.
26. (original) The suction box of claim 25, wherein said monitoring circuit is portable.
27. (currently amended) A method of determining a wear state of a seal strip in a suction box of a paper machine, said method comprising the steps of:
- providing a seal strip carried by a holder and at least one target carried by said seal strip;
  - biasing said seal strip against a suction roll shell;
  - 5 positioning a sensor apart from said seal strip and in association with at least one corresponding said target; and
  - outputting a signal from said sensor indicative of a position of said at least one corresponding target relative to said holder.
28. (original) The method of claim 27, including the steps of:
- coupling said sensor with an electrical plug-in connector; and
  - positioning said electrical plug-in connector outside said suction roll.
29. (original) The method of claim 27, including the step of connecting a monitoring circuit with said electrical connector.
30. (original) The method of claim 29, wherein said monitoring circuit is portable.

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31. (previously presented) The paper machine of claim 1, including at least one electrical plug-in connector positioned outside said suction roll, each said electrical plug-in connector coupled with a corresponding said sensor.

32. (currently amended) The paper machine of claim 31, further comprising a monitoring circuit connectable with said electrical plug-in connector.